

ENVIT

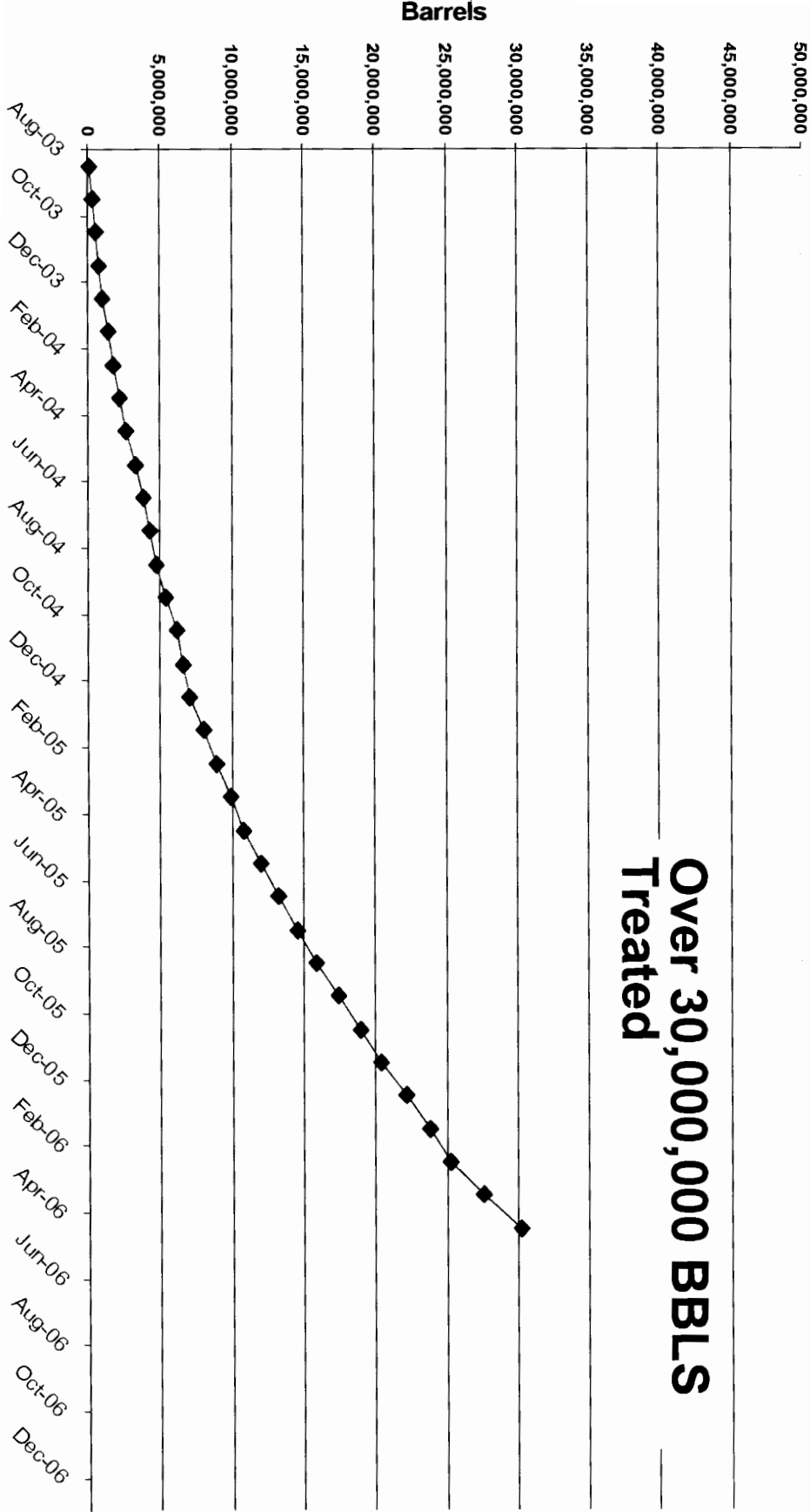
“...it's the air we breathe and the water we drink”

EMIT Water Discharge Technology

- Sheridan, WY based
- 10 Operating Treatment Sites
 - 9 in Wyoming
 - 1 in Montana
- 125,000 BPD Treatment Capacity
- DEQ State – Wide Construction Permit
- 20 CFS NPDES Permit for Powder River Discharge

EMIT Cumulative Water Treated

Over 30,000,000 BBLs Treated



EMIT's Process

- Utilize a Higgins LoopTM Counter Current Ion Exchange System for Cation Removal
- Raise pH with Air Stripper
- Add Gypsum (CaSO_4) to Increase Calcium for SAR Modification
- Blend Specific %'s of Produced water
- Meet SAR, Na and Electrical Conductivity Requirements.

Sodium Based

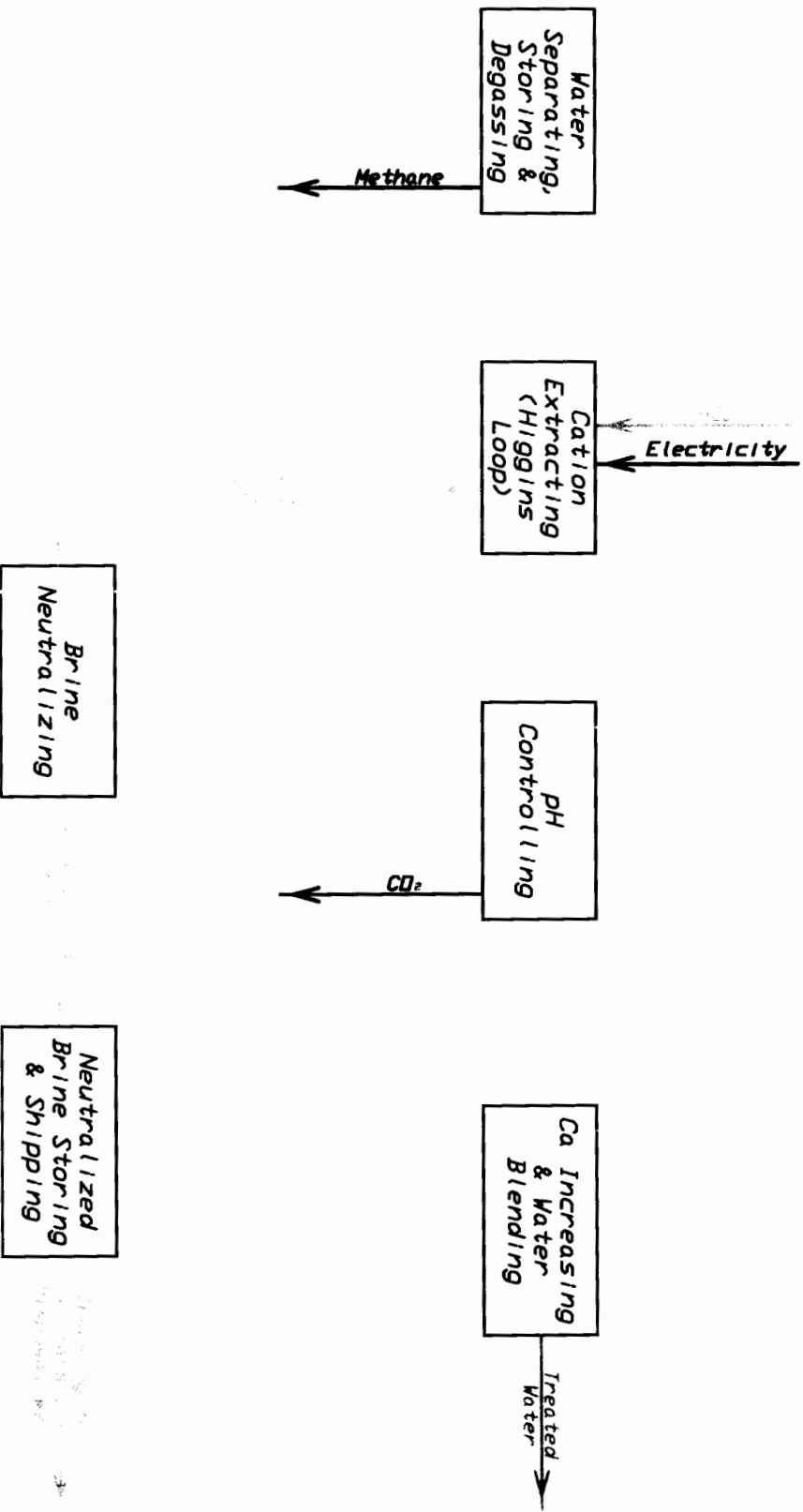


EN

CREATED BY DRS
JOB NO.

APPROVAL BY DCB
DATE 02/28/06

EMIT Process Overview SAR



EMIT

DRAWN BY JIRS
JOB NO.
APPROVED BY JCB
DATE 02/28/06

Higgins Loop™ Ion Exchange Systems

LOOP CONFIGURATION

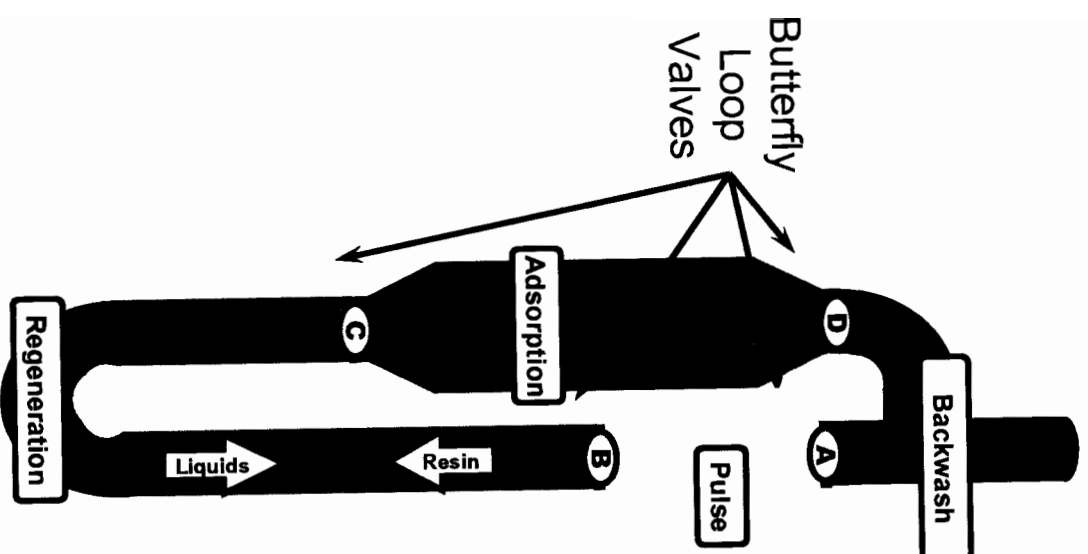
Cylindrical Resin Loop

⇒ 4 Vessels Separated by Loop Valves

- Regeneration - Ion Desorbed from Resin
- Backwash - Fines & Solids Removal

Countercurrent Flows

- ⇒ Resin Moves Clockwise Intermittently
- ⇒ Feed & Regen Flows-Counterclockwise



EMIT WATER QUALITY DATA

Wyoming Big George Coal

Powder River Discharge

	Supplied Water	Throughput Water	Treated Discharge Water
pH	7.7	6.6	6.7
EC	3980	322	1730
SAR	35.8	6.8	3.3
Na	1030	58	181
Ca	32	7	227
Mg	19	ND	2